

IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND the claims according to the following:

1. (CURRENTLY AMENDED) A plasma display apparatus for displaying a color image, comprising:

a controller controlling a number of emissions or an intensity thereof for each of input primary color video signal, signals respectively to display a color image;

a detection portion-unit detecting a respective luminance levels of for the input primary color video signals for theeach color image displayed; and

a white balance correction unit portion correcting maintaining a constant white balance regardless of the number of emissions or intensity of each input primary color video signal by adjusting respective amplitudes of each of the input primary color video signals of the for each displayed color image respectively in accordance with said detected luminance level for each displayed color image.

2. (CURRENTLY AMENDED) The display apparatus as claimed in claim 1, wherein said detection portion-unit detects said number of emissions or said intensity from a display ratio of an image produced by said primary color video signals.

3. (CURRENTLY AMENDED) The display apparatus as claimed in claim 2, further comprising a control portion-unit controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said display ratio of said image.

4. (CURRENTLY AMENDED) The display apparatus as claimed in claim 3, wherein said white balance correction portion-unit comprises a computing unit and a plurality of multipliers wherein said computing unit computes amplitude coefficients for said primary color video signals in accordance with said display ratio of said image, and said multipliers multiply said primary color video signals respectively by said computed amplitude coefficients.

5. (CURRENTLY AMENDED) The display apparatus as claimed in claim 3, wherein said white balance correction portionunit comprises a storage unit and a plurality of multipliers wherein said storage unit outputs amplitude coefficients for said primary color video signals in accordance with said display ratio of said image, and said multipliers multiply said primary color video signals respectively by said amplitude coefficients output from said storage unit.

6. (CURRENTLY AMENDED) The display apparatus as claimed in claim 3, wherein said white balance correction portionunit comprises a storage unit wherein said storage unit outputs amplitude-adjusted primary color video signals in accordance with said primary color video signals and said display ratio of said image.

7. (CURRENTLY AMENDED) The display apparatus as claimed in claim 1, wherein said detection portionunit detects said number of emissions or said intensity from a display current that flows when displaying an image in accordance with said primary color video signals.

8. (CURRENTLY AMENDED) The display apparatus as claimed in claim 7, further comprising a control portionunit controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said image display current.

9. (CURRENTLY AMENDED) The display apparatus as claimed in claim 8, wherein said white balance correction portionunit comprises a computing unit and a plurality of multipliers wherein said computing unit computes amplitude coefficients for said primary color video signals in accordance with said image display current, and said multipliers multiply said primary color video signals respectively by said computed amplitude coefficients.

10. (CURRENTLY AMENDED) The display apparatus as claimed in claim 8, wherein said white balance correction portionunit comprises a storage unit and a plurality of multipliers wherein said storage unit outputs amplitude coefficients for said primary color video signals in accordance with said image display current, and said multipliers multiply said primary color video signals respectively by said amplitude coefficients output from said storage unit.

11. (CURRENTLY AMENDED) The display apparatus as claimed in claim 8, wherein said white balance correction portionunit comprises a storage unit wherein said storage unit outputs amplitude-adjusted primary color video signals in accordance with said primary color video signals and said image display current.

12. (CURRENTLY AMENDED) The display apparatus as claimed in claim 1, wherein said detection portionunit detects said number of emissions or said intensity from an external applied luminance-adjusting input.

13. (CURRENTLY AMENDED) The display apparatus as claimed in claim 12, further comprising a control portionunit controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said externally applied luminance-adjusting input.

14. (CURRENTLY AMENDED) The display apparatus as claimed in claim 13, wherein said white balance correction portionunit comprises a computing unit and a plurality of multipliers wherein said computing unit computes amplitude coefficients for said primary color video signals in accordance with said externally applied luminance-adjusting input, and said multipliers multiply said primary color video signals respectively by said computed amplitude coefficients.

15. (CURRENTLY AMENDED) The display apparatus as claimed in claim 13, wherein said white balance correction portionunit comprises a storage unit and a plurality of multipliers wherein said storage unit outputs amplitude coefficients for said primary color video signals in accordance with said externally applied luminance-adjusting input, and said multipliers multiply said primary color video signals respectively by said amplitude coefficients output from said storage unit.

16. (CURRENTLY AMENDED) The display apparatus as claimed in claim 13, wherein said white balance correction portionunit comprises a storage unit wherein said storage unit outputs amplitude-adjusted primary color video signals in accordance with said primary color video signals and said externally applied luminance-adjusting input.

17. (ORIGINAL) The display apparatus as claimed in claim 1, wherein emissions

due to said primary color video signals are produced from phosphors of three primary colors, red, green, and blue.

18. (ORIGINAL) The display apparatus as claimed in claim 1, wherein said display apparatus is a plasma display apparatus.

19. (CURRENTLY AMENDED) A display apparatus, comprising:
a controller to display a color image by controlling a number of emissions or an intensity ~~thereof~~ in accordance with primary color video signals input thereto;
a first detection ~~portion~~unit detecting input gray levels of ~~said~~each displayed color image represented by said primary color video signals; and
a white balance correction unit ~~portion~~ ~~correcting~~ ~~and~~ maintaining a constant white balance regardless of the gray levels by adjusting output gray levels of said primary color video signals of ~~the~~each displayed color image in accordance with said detected input gray levels of ~~the~~each displayed color image, wherein said white balance correction ~~portion~~unit further comprises a computing unit to compute gray level correction coefficients in accordance with said detected input gray levels of ~~the~~each displayed color image, and a plurality of correction units to correct said detected input gray levels of ~~the~~each displayed color image according to said computed gray level correction coefficients.

20. (CANCELLED)

21. (CANCELLED)

22. (CURRENTLY AMENDED) The display apparatus as claimed in claim 19, wherein said white balance correction ~~portion~~unit comprises a storage unit that stores and outputs computed gray level correction coefficients in accordance with said detected input gray levels, and said correction units apply corrections to said input gray levels by using said computed correction coefficients.

23. (CURRENTLY AMENDED) The display apparatus as claimed in claim 19, further comprising:

a second detection ~~portion~~unit detecting a display ratio or display current of an image produced by said primary color video signals; and

a control portionunit controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said detected display ratio or said detected display current.

24. (ORIGINAL) The display apparatus as claimed in claim 19, wherein emissions due to said primary color video signals are produced from phosphors of three primary colors, red, green, and blue.

25. (ORIGINAL) The display apparatus as claimed in claim 19, wherein said display apparatus is a plasma display apparatus.

26. (CURRENTLY AMENDED) A white balance correction circuit for use in a plasma display apparatus, comprising:

a controller controlling a number of emissions or an intensity thereof for each of input primary color video signals signal, respectively to display a color image;

a detection portionunit detecting a luminance level of for the input primary color video signals for the each color image displayed; and

a correction circuit correcting white balance by adjusting amplitudes of said input primary color video signals of the displayed color image in accordance with said detected luminance level.

27. (ORIGINAL) The white balance correction circuit as claimed in claim 26, further comprising:

a computing unit computing amplitude coefficients for said primary color video signals in accordance with said number of emissions or said intensity; and

a plurality of multipliers multiplying said primary color video signals respectively by said computed amplitude coefficients wherein:

 said white balance, which varies with the number of emissions for, or the intensities of, said primary color video signals, is corrected by adjusting the amplitudes of said primary color video signals in accordance with said controlled number of emissions or said controlled intensity.

28. (ORIGINAL) The white balance correction circuit as claimed in claim 26, further comprising:

a storage unit storing amplitude coefficients for said primary color video signals, and outputting said amplitude coefficients in accordance with said number of emissions or said intensity; and

a plurality of multipliers multiplying said primary color video signals respectively by said output amplitude coefficients wherein:

 said white balance, which varies with the number of emissions for, or the intensities of, said primary color video signals, is corrected by adjusting the amplitudes of said primary color video signals in accordance with said controlled number of emissions or said controlled intensity.

29. (ORIGINAL) The white balance correction circuit as claimed in claim 26, further comprising:

 a computing unit computing amplitude coefficients for said primary color video signals in accordance with said number of emissions or said intensity; and wherein:

 said white balance, which varies with the number of emissions for or the intensities of said primary color video signals, is corrected by adjusting the amplitudes of said primary color video signals in accordance with said controlled number of emissions or said controlled intensity.

30. (ORIGINAL) The white balance correction circuit as claimed in claim 26, further comprising:

 a storage unit storing amplitude-adjusted primary color video signals, and outputting said amplitude coefficients in accordance with said primary color video signals and said number of emissions or said intensity; and wherein:

 said white balance, which varies with the number of emissions for or the intensities of said primary color video signals, is corrected by adjusting the amplitudes of said primary color video signals in accordance with said controlled number of emissions or said controlled intensity.

31. (CURRENTLY AMENDED) The white balance correction circuit as claimed in claim 26, wherein said detection portionunit detects said number of emissions or said intensity from a display ratio of an image produced by said primary color video signals.

32. (CURRENTLY AMENDED) The white balance correction circuit as claimed in

claim 26, wherein said detection ~~portion~~unit detects said number of emissions or said intensity from a display current that flows when displaying an image in accordance with said primary color video signals.

33. (CURRENTLY AMENDED) The white balance correction circuit as claimed in claim 26, wherein said detection ~~portion~~unit detects said number of emissions or said intensity from an externally applied luminance-adjusting input.

34. (CURRENTLY AMENDED) A white balance correction circuit for use in a display apparatus which displays a color image by controlling the number of emissions or the intensity thereof in accordance with primary color video signals input thereto, said white balance correction circuit comprising:

a first detection ~~portion~~unit detecting input gray levels of said color image represented by said primary color video signals; and

a correction ~~portion~~unit correcting a white balance by adjusting output gray levels of said primary color video signals for the color image displayed in accordance with said detected input gray levels of said color image displayed, wherein the correction ~~portion~~unit further comprises:

a computing unit to compute gray level correction coefficients in accordance with said detected input gray levels of said color image displayed, and

a plurality of correcting units to correct said detected input gray levels for said color image displayed, according to said computed gray level correction coefficients.

35. (CANCELLED)

36. (CANCELLED)

37. (CURRENTLY AMENDED) The white balance correction circuit as claimed in claim 34, wherein said correction ~~portion~~unit comprises:

a storage unit storing and outputting gray level correction coefficients in accordance with said detected input gray levels and the plurality of correcting units apply the corrections to said detected input gray levels by using said output correction coefficients.

38. (CURRENTLY AMENDED) The white balance correction circuit as claimed in claim 34, further comprising:

a second detection ~~portion~~unit detecting a display ratio or display current of an image produced by said primary color video signals; and

a control ~~portion~~unit controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said detected display ratio or said detected display current.

39. (CANCELLED)

40. (CURRENTLY AMENDED) A method of correcting white balance in a plasma display apparatus, comprising:

a controller controlling a number of emissions or an intensity ~~thereof~~ for each of input primary color video ~~signals~~signals, respectively to display a color image;

detecting a luminance level of the input primary color video signals for the color image displayed; and

adjusting amplitudes of said input primary color video signals of the displayed color image in accordance with said detected luminance level, thereby correcting the white balance.

41. (ORIGINAL) The white balance correction method as claimed in claim 40, wherein said number of emissions or said intensity is detected from a display ratio of an image produced by said primary color video signals.

42. (PREVIOUSLY PRESENTED) The white balance correction method as claimed in claim 41, further comprising the step of controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said display ratio of said image.

43. (ORIGINAL) The white balance correction method as claimed in claim 40, wherein said number of emissions or said intensity is detected from a display current that flows when displaying an image in accordance with said primary color video signals.

44. (ORIGINAL) The white balance correction method as claimed in claim 43, further comprising the step of controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said image display current.

45. (ORIGINAL) The white balance correction method as claimed in claim 40, wherein said number of emissions or said intensity is detected from an externally applied luminance-adjusting input.

46. (ORIGINAL) The white balance correction method as claimed in claim 45, further comprising the step of controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with said externally applied luminance-adjusting input.

47. (PREVIOUSLY PRESENTED) A method of correcting white balance in a display apparatus which displays a color image by controlling number of emissions or intensity thereof in accordance with primary color video signals input thereto, the method comprising:

correcting a white balance by adjusting output gray levels of said primary color video signals for the color image displayed according to input gray levels of said color image represented by said primary color video signals;

computing gray level correction coefficients according to the input gray levels of said color image displayed represented by said primary color video signals, and

correcting the input gray levels for said color image displayed according to the computed gray level correction coefficients.

48. (PREVIOUSLY PRESENTED) The white balance correction method as claimed in claim 47, wherein the gray level correction coefficient computing comprises detecting the input gray levels of said images represented by said primary color video signals.

49. (PREVIOUSLY PRESENTED) The white balance correction method as claimed in claim 47, further comprising controlling the number of emissions for, or the intensities of, said primary color video signals in accordance with a display ratio or display current of said image.

50. (CANCELLED)

51. (PREVIOUSLY PRESENTED) A method of correcting white balance in a plasma

display apparatus, comprising:

a controller controlling a number of emissions or intensity thereof for each of input primary color video signals respectively to display a color image;

defining luminances of the input primary color video signals based upon a luminance level of the input primary color video signals for the color image displayed; and

setting an amplitude ratio between each of said input primary color video signals, respectively, according to the defined luminances of said input primary color video signals of the displayed color image to suppress variation of white balance with said defined luminances.

52. (PREVIOUSLY PRESENTED) The white balance correction method as claimed in claim 51, wherein a color image is displayed by means of light-emitting elements in accordance with luminance-defined primary color video signals.

53. (PREVIOUSLY PRESENTED) A white balance correction circuit for use in a plasma display apparatus which displays a color image using primary color video signals, comprising:

a controller controlling a number of emissions or intensity thereof for each of input primary color video signals respectively to display a color image;

an adjusting unit adjusting the amplitude of each of said input primary color video signals for the color image displayed;

a storage unit storing an amplitude ratio for correcting the amplitudes of said input primary color video signals for the color image displayed; and

a setting unit setting in said adjusting unit the amplitude ratio stored in said storage unit wherein:

the amplitude ratio between each of said input primary color video signals for the color image displayed is set in accordance with a luminance level of said input primary color video signals of the color image displayed to correct a white balance which varies with the luminance level of said input primary color video signals of the displayed color image.

54. (CURRENTLY AMENDED) A white balance correction circuit for use in a plasma display apparatus which displays a color image using primary color video signals, comprising:

a controller controlling a number of emissions or an intensity thereof for each of input primary color video signals signal, respectively to display a color image;

an adjusting unit adjusting the amplitude of each of said input primary color video signals

for the each color image displayed;

a computing unit computing an amplitude ratio between each of said input primary color video signals for the color image displayed based upon a luminance level of the input primary color video signals for the color image displayed to correct a white balance which varies with the luminance level of said primary color video signals of the displayed color image; and

a setting unit setting in said adjusting unit the amplitude ratio of the displayed color image computed by said computing unit.